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(54) **PLASMODIUM FALCIPARUM
CIRCUMSPOROZOITE VACCINE GENE
OPTIMIZATION FOR SOLUBLE PROTEIN
EXPRESSION**

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435/252.3; 435/69.1; 435/252.33(57) **ABSTRACT**

The present invention provides novel nucleotide sequence and other constructs used for expression of novel recombinant *P. falciparum* circumsporozoite proteins in bacterial cells such as *E. coli*. Processes are provided for producing a soluble recombinant *P. falciparum* CSP from *E. coli*. Methods to produce a human-grade, highly immunogenic anti-malaria vaccine based on CSP are shown. The novel recombinant *P. falciparum* circumsporozoite protein by itself or in combination with other malaria antigens or adjuvants can form the basis of an effective malaria vaccine.